

## SEVERE LOCAL STORMS, OCTOBER, 1927

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the Annual Report of the Chief of Bureau]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Campbell, Tex. (near).....	1	4:30 p. m.	200	-----	\$4, 500	Tornado.....	Some damage to buildings and crops.....	Official, U. S. Weather Bureau.
Letot, Tex. (near).....	1	6:50 p. m.	440	-----	7, 500	do.....	Buildings damaged; 3 persons injured; path 1½ miles long.	Do.
Ladonia, Tex. (near).....	1	8:30 p. m.	100	-----	20, 000	do.....	Considerable damage to property; 3 persons seriously injured; path ¼ mile long.	Do.
Quinton (near), to Whitefield, Okla.	1	8:45-11:15 p. m.	150-300	-----	31, 500	do.....	Considerable damage to property other than crops; 39 persons injured.	Do.
Columbus, Kans. (near).....	2	12:15 a. m.	200	-----	10, 000	do.....	A score of farm buildings demolished; power lines damaged; livestock killed.	Do.
Gentry, Ark. (4 miles west of)	2	1 a. m.	-----	-----	-----	do.....	Houses unroofed; barns demolished; 2 homes moved from foundations; orchard uprooted.	The Record (Fort Smith, Ark.).
Milwaukee, Wis.....	2	P. m.	-----	-----	-----	Wind.....	Wires blown down; trees broken; traffic impeded	Official, U. S. Weather Bureau.
Missouri (southwestern).....	2-3	-----	-----	-----	5, 300	do.....	Buildings and crops damaged; tornadic wind near Neosho.	Do.
Monroe and Iowa Counties, Iowa.	3	2:30 p. m.	-----	-----	-----	Hail.....	Crops injured.	Do.
Milwaukee, Wis.....	6	P. m.	-----	-----	2, 000	Rain and wind.....	Overhead wires damaged; basements flooded; pavements washed out.	Do.
Sycamore, Ill. (near).....	8	7:30 p. m.	880	-----	-----	Wind.....	Damage to property and vegetation over path 3 miles in length.	Do.
Dill, Ark.....	11	11:30 p. m.	200	5	30, 000	Tornado.....	Many homes wrecked or damaged; gin machinery ruined; 31 persons injured.	Arkansas Gazette (Little Rock, Ark.)
New York (central and southeastern).	12	-----	-----	-----	-----	Rain and high wind.	Streets and cellars flooded; trees, telephone and power lines considerably damaged by wind.	Official, U. S. Weather Bureau.
Ashland County, Wis. (south-central).	30	4:30 p. m.	880	-----	1, 200	Probably small tornado.	Roofs of several houses and barns blown off; haystacks scattered.	Do.

## STORMS AND WEATHER WARNINGS

## WASHINGTON FORECAST DISTRICT

On the 2d storm warnings were ordered between Daytona, Fla., and Savannah, Ga., in connection with a disturbance that apparently developed off the northeast Florida coast and moved north-northwest, crossing the coast line between Savannah and Charleston. The only strong winds were reported near Charleston. The disturbance was of very small extent and short duration, but was seemingly quite severe at the time it crossed the coast line. This disturbance redeveloped being central over Virginia on the evening of the 3d when storm warnings were ordered from Delaware Breakwater to Eastport. Winds of gale force occurred over the region of display.

In connection with a disturbance of marked intensity central over eastern Lake Superior on the evening of the 12th, storm warnings were ordered from Hatteras to Eastport.

The first indication of a tropical disturbance during the month appeared over the northwestern Caribbean on the evening of the 16th and advices were issued generally to shipping and storm warnings were ordered from Punta Gorda to Miami, Fla. As the disturbance moved east by north, to the south of Cuba storm warnings were ordered down. The disturbance was of small extent but of moderate intensity causing some destruction to crops as it passed northeast over extreme eastern Cuba during the night of the 18th.

During this time another disturbance developed in about latitude 30°, longitude 75°, and moved northward. On the afternoon of the 17th storm warnings were ordered from Delaware Breakwater to Eastport, and on the evening of that date extended southward to Wilmington, N. C., and on the morning of the 18th extended northward to Eastport. Warnings were continued on the 19th from Hatteras to Eastport. Strong winds and gales were general.

A tropical disturbance of very slight character passed over St. Lucia, Windward Islands, during the night of the 28th. It thence moved northwestward passing through the Mona Passage and trace of it was lost northeast of the

Bahamas. So far as reports received up to this time indicate it was not of any appreciable energy.

Small-craft warnings were issued on the 9th between Atlantic City and Boston.

Frost warnings were ordered on the 8th, 10th, 12th, 13th, 14th, 16th, 17th, 18th and 19th.—*R. H. Weightman.*

## CHICAGO FORECAST DISTRICT

The outstanding feature in the Chicago forecast district during October, 1927, was a period of remarkably mild, pleasant weather during the latter half of the month. It began soon after the middle of the month and lasted until the close. Almost daily from the 19th until the 31st one or more stations in the district reported the highest temperatures of record for so late in the season. Furthermore, virtually no precipitation occurred during this period until the 28th.

*Frost warnings.*—At the beginning of the month frost warnings were still required over most of the district, except the extreme northern portion, but by the close most vegetation had been killed by frost except in southern and extreme eastern Kansas, Missouri, and the southern portions of Illinois and Indiana. Frost warnings, more or less general in scope, were issued on 17 dates. None was issued, however, between the 24th and 29th, inclusive, when the remarkable mild period above referred to was prevalent.

*Storm warnings.*—Conditions required the rather frequent issuance of either small-craft or storm warnings during the first three weeks of the month. Most of these were small-craft warnings, but storm warnings were necessary in a few cases.

On the morning of the 2d storm warnings were issued for the Upper Lakes for a disturbance that had moved north-northeastward from Texas to the Upper Mississippi Valley. This warning was justified except on Lake Huron.

Storm warnings were again issued on the night of the 10th in connection with a disturbance that was advancing from the Northwest. The storm lost force during the night and the warnings were changed to those for small craft on the following morning. On the night of the 11th—

12th, however, this disturbance underwent a recrudescence, so that storm warnings had to be issued for Lake Ontario and extreme eastern Lake Erie on the following morning. The warning was fully verified.

The next disturbance of import was one from tropical waters. On the morning of the 18th the center was off the Delaware coast and the winds were becoming strong over portions of the Lower Lakes. Accordingly, northeast storm warnings were issued for Lake Ontario and for Lake Erie from Cleveland eastward. Full verification of this warning resulted. In fact, this disturbance, together with related barometric conditions to the westward, required the issuance of either small-craft or storm warnings on the following two days.

*Fire-weather warnings.*—On the 16th a dry period began in Minnesota that gave that State its highest fire hazard since May, 1926. A large number of fires occurred from October 18 to 29. General fire-weather forecasts were sent to the Duluth, Minn., office on several dates, where they were put in shape for distribution by the official especially assigned to that work. Eight such forecasts were issued for the Minnesota area. This work was also extended into Upper Michigan during October, and five fire-weather forecasts for that area were issued.—*C. A. Donnel.*

#### NEW ORLEANS FORECAST DISTRICT

The weather during October was exceptionally mild throughout the district except for a cold period in the second decade. A striking feature was the absence of precipitation during the second and third decades.

No storm warnings were issued. Small-craft warnings were displayed on the Texas coast on October 1. No general storms occurred without warnings.

Frost warnings were issued for the northwest portion of the district on the 2d and 3d; for the north portion of the district on the 12th, and northern Arkansas on the 13th, and Oklahoma and Arkansas on the 19th. Frost occurred over part of the area covered in the forecast.

Norther warnings for shipping on the Mexican coast were issued on the 12th.—*I. M. Cline.*

#### DENVER FORECAST DISTRICT

Mild temperatures and settled weather prevailed throughout the district during most of the month, the principal exceptions being rather stormy weather in the northern portion of the district during the first week and in the southern portion during the last few days. Warnings of frosts or freezing temperatures were issued from time to time as long as they were required for parts of Wyoming, Colorado, Utah, and New Mexico, and advices of expected fresh to strong winds in southern Wyoming and northeastern Colorado were issued for the benefit of the air-mail flyers on the 4th, 9th, 10th, 13th, and 14th. Most of the above-mentioned warnings were verified either fully or in part. On the 31st, when rain or snow and colder weather with fresh to strong northerly winds was indicated, livestock warnings were issued for eastern and southern Wyoming. Moderately severe conditions were experienced in the southeastern part of the State, many automobiles being marooned by drifted snow on the main highways in the vicinity of Laramie.—*E. B. Gittings.*

#### SAN FRANCISCO FORECAST DISTRICT

The North Pacific high-pressure system was above its normal intensity at the opening of the month, its major axis lying in a northwest-southeast position, and favoring the development of disturbances on its northeast periphery. Two such disturbances developed early in the month, one on the 1st and another on the 3d. The second was attended by strong winds and gales along the north coast, but no warnings were displayed as the depression formed over the district without premonitory indications. A disturbance from the Gulf of Alaska on the 9th appeared to warrant the display of small-craft warnings on that date over Puget Sound and on the Washington coast, and fresh winds followed over much of the area reaching moderate gale force at points on the coast. A deep and very large depression developed over the northeast Pacific a few days later, warnings for which were displayed at northern ports on the 14th. These warnings continued in force until the 17th, but were changed in character at times to indicate the force and direction of the blow, and included a display of "whole gale" warnings on the Washington-Oregon coast from the evening of the 14th to the morning of the 16th. Strong to whole gales prevailed over much of the region covered by the warnings, beginning with the 15th. No further storm warnings were issued until the 28th, when they were ordered for the Washington-Oregon coast. Strong winds and gales occurred during the same day, subsiding by night.

Special fire-weather forecasts for northern California, which had been a feature of the daily forecast work since the beginning of the fire season, were discontinued on the 26th, due to the occurrence of rains which mitigated the fire hazard in all parts of the State on that date.—*Thomas R. Reed.*

#### RIVERS AND FLOODS

By H. C. FRANKENFIELD

*Atlantic drainage.*—Between October 16 and 20 heavy rains fell over the Susquehanna drainage basin, except the extreme upper portion. Some of the heavier amounts were as follows:

	Inches		Inches
Cortland, N. Y. ....	2. 30	Montrose, Pa. ....	5. 05
New Berlin, N. Y. ....	3. 22	Towanda, Pa. ....	3. 83
Oneonta, N. Y. ....	3. 68	Wilkes-Barre, Pa. ....	4. 17
Sherburne, N. Y. ....	2. 52	Sunbury, Pa. ....	3. 36
Bainbridge, N. Y. ....	3. 90	Harrisburg, Pa. ....	2. 82
Binghamton, N. Y. ....	4. 60		

There followed, of course, a rapid rise in the river and moderate flood stages occurred almost as far down as the junction with the West Branch. Fortunately, the lowlands had been well cleared of crops, road and bridge work was practically complete, and the resulting flood damage was relatively small. The total of reported losses was \$60,000, and property to the value of \$5,000 was saved through the warnings. Apparently there was considerable crop damage, but figures were unobtainable.

The same general rain storm also caused a pronounced rise in Delaware River and tributaries, although no flood stages were reported, except at Hawley, Pa., on the Lackawanna River. The Lackawanna River also overflowed its banks, and caused much damage and inconvenience throughout the valley, especially in and around Scranton, Pa.